# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| Applicant                       | : Robert J. Deri et al.  | Docket No. : IL-10504  |
|---------------------------------|--|--|
|                                 |  | Art Unit :   |
| Serial No.                      |  | Batch No. :  |
| Filed                           | :  | Examiner   |
| For                             | <ul> <li>Wavelength-Conserving Grating<br/>Router For Intermediate Wavelength<br/>Density</li> </ul>   |  |
| VERI<br>STA                     | FIED STATEMENT (DECLARATION) CLA<br>ATUS [37 CFR 1.9 (f) and 1.27(d)] - NONPRO   | AIMING SMALL ENTITY<br>OFIT ORGANIZATION   |
| I hereby<br>organizat           | declare that I am an official empowered ion identified below:  |  |
|                                 | The Regents of the University of Califor<br>Office of General Counsel<br>1111 Franklin Street<br>Oakland, CA 94607-5200  | nia  |
|                                 | ORGANIZATION   |  |
| χ_U                             | niversity or other Institute of Higher Educat  | ion  |
| I hereby<br>nonprof<br>fees und | declare that the nonprofit organization it organization as defined in 37 CFR 1.9(e) ler Section 41(a) and (b) of Title 35, United n entitled: Wavelength-Conserving Grant Density notor(s) Robert J. Deri, Rajesh R. Patel, Steventor(s) | identified above qualifies as a for purposes of paying reduced States Code with regard to the ting Router For Intermediate |
| describe                        |  |  |
| -                               | $\chi$ the specification filed herewith.   | c1 1   |
|                                 | application serial no  | , niea   |
|                                 | application serial no, i   | ssued  |

I hereby declare that rights under contract or law have been conveyed to and remain with the nonprofit organization with regard to the above identified invention, except for a license to a Federal Agency pursuant to 35 USC 202(c) (4).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

X no such person, concern, or organization

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true: and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

JANET G. TULK
Laboratory Counsel
Lawrence Livermore National Laboratory
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Livermore, CA 94551

Janel G. Tulk

<u>6/7/00</u> Date

# COMBINED DECLARATION AND POWER OF ATTORNEY

Attorney Docket: IL-10504

| ■ Declaration submitted   | Attorney Docket: IL-10504  |
|---|--|
| with Initial Filing   | Applicant: Robert J. Deri et al.   |
| ☐ Declaration submitted   | Serial No.:  |
| after Initial Filing (surcharge   | Filing Date:   |
| (37 CFR 1.16(e)) required)  |  |
| •   |  |
| As a below named inventor(s), I (we) here   | eby declare that:  |
| My (Our) residence, post office addr<br>(our) name(s).  | ress and citizenship(s) are as stated below next to my   |
| original first and joint inventor (if plural na   | sole inventor (if only one name is listed below) or an armes are listed below) of the subject matter which is the invention entitled: Wavelength-Conserving relength Density   |
|   |  |
| the specification of which (check one)  X is attached heretowas filed  Number or PCT International Application N                      | on as United States Application  |
| and was amended on(if applicable).  |  |
| I (We) hereby state that I (we) have identified specification, including the claim  | reviewed and understand the contents of the above-<br>is, as amended by any amendment referred to above.   |
| I (We) acknowledge the duty to disc<br>defined in 37 CFR 1.56.  | close information which is material to patentability as  |
| foreign application(s) for patent or inventor application which designated at least one control and have also identified below, by ch | benefits under 35, U.S.C. 119(a)-(d) or 365(b) of any c's certificate, or 365(a) of any PCT international country other than the United States of America, listed necking the box, any foreign application for patent or ational application having a filing date before that of the |
| Prior Foreign Application(s)  | Priority Not Claimed   |
| (Application Number) (Country)  | (Foreign Filing Date)  |
| (Application Number) (Country)  | (Foreign Filing Date)  |
| I (We) hereby claim the benefit und application(s) listed below:  | ler 35 U.S.C. 119(e) of any United States provisional  |
| 60/141899 6/  | 730/99   |
|   | ng Date  |
| -rr   | •  |

I (We) hereby claim the benefit under 35 U.S.C. 120 of any United States applications(s), or of any PCT international application designating the United States of America, listed below

I (We) hereby claim the benefit under 35 U.S.C. 120 of any United States applications(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

| Application Serial No.                              | Filing Date                  | Status  |
|---|------------------------------|---|
| POWER OF ATTORNEY: registered practitioner(s) to pr | osecute this application and | I (we) hereby appoint the following I to transact all business in the Patent an |
| Names   | Registra                     | ation No.   |
| Alan H. Thompson                                    | 29,9                         | 81  |
| Christopher J. Horgan                               | 40,3                         | 94  |
| Eddie E. Scott                                      | 25,2                         | 20  |
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| P.O. Box 808 - L-703                                |                              |   |
| Livermore, California                               | 94551                        |   |

I (We) hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

| ROBERT J. DERI  | SEE PAGE 4                             |
|---|--|
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| RAJESH R. PATEL   | Jacob Total                            |
| Full Name of Inventor                                     | Signature                              |
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|--|-----------|---|---|
| STEVEN W. BOND                                 | Her       | WILL                                    |   |
| Full Name of Inventor                          |           | Signature                               |   |
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| CORY V. BENNETT                                | breist    | Bennett !                               |   |
| Full Name of Inventor                          |           | Signature 6/                            |   |
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| XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX        | XXXXXXXXX | XXXXXXXXXXXXXXXX                        | j |

I (We) hereby claim the benefit under 35 U.S.C. 120 of any United States applications(s), or 365(c) of any PC1 international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the daty to disclose information which is material to patentability as defined in 37 CPR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application,

| Application Serial No.  | Filing Date               | Status   |
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| POWER OF ATTORNEY: As registered practitioner(s) to prosent the connected the | cute this application and | I (we) hereby appoint the following I to transact all business in the Patent and |
| Numes   |                           | ation No.  |
| Alan II, Thompson   |                           |  |
| Christophor J. Ylorgan 40,39  |                           | 94   |
| L'ddie E. Scott   | 25,2                      | 20   |
| Direct Correspondence T   | `o: ,                     | Direct Telephone Calls To:   |
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| Patent Attorney   | L.E. Carnahan             |  |
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I (We) hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such-willful-false statements may jeopardize the validity of the application or any patent issued thereon.

| ROBERT J. DERI                                | Rht D. Seri                                  |
|---|--|
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| RAJESH R. PATEL                               |  |
| Full Name of Inventor                         | Signature                                    |
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| Postal Address (Street, City, State, Zip Code | Citizenship                                  |
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|                      | ntor's Names:   |                          |                 |   |                         |                           |                              |                  |
|                      |   |                          | Th              | The Regents of the University of California |                         |                           |                              |                  |
| Robert               | J. Deri   |                          | 11              | 11 F  | anklin                  | Street                    |                              |                  |
|                      |   |                          | Oa              | aklan                                       | d, CA                   | 94612-35                  | 50                           |                  |
|                      | •   |                          |                 |   |                         |                           |                              |                  |
| Attorney             | Docket No.: IL-10504  | 1                        |                 |   |                         |                           |                              |                  |
| 3. Natu              | re of conveyance:   |                          |                 |   |                         |                           |                              |                  |
|                      | Assignment  |                          | Execu           | ition l                                     | Date:                   | 8/15/00                   |                              |                  |
| 4. Appli             | cation number(s) or pa                                      | tent numb                | er(s):          | IL-10                                       | 504                     |                           |                              |                  |
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| 5. Name a            | and address of party to who<br>ning document should be m    | om correspo<br>nailed:   | ndence          | 6. To                                       | otal Num                | ber of app                | lications and pate<br>ONE    | ents involved:   |
| Name:                | L.E. Camahan  |                          |                 | 7. T  | otal fe                 | е                         | \$                           | 40.00            |
| Address:             | Lawrence Livermore  | Nat. Labor               | atory           |   | Enclos                  | sed                       |                              |                  |
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|                      | 7000 East Avenue  | •                        |                 | 8.  | Deposit Account number: |                           |                              | ·                |
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| 9. State             | ment and Signature  |                          |                 | `,  |                         |                           |                              |                  |
| To the               | best of my knowledge and<br>ue copy of the original docu    | I belief, the f          | oregoin         | g infor                                     | mation i                | s true and                | correct and any              | attached copy    |
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| Nam                  | thy E. Raymond le of Person Signing                         |                          |                 | natur                                       |                         |                           | Da                           | ate              |
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| o the Hon Name      | e of conveying party                              | (ies):                            | 2. Nan    | ne ar    | d Add     | ress of receiving          | ng party(i   | es):                    |
| 1. Inve             | ntor's Names:                                     | <u> </u>                          |           |          |           |                            |              |                         |
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| Steven              | R. Patel<br>W. Bond                               |                                   | Oa        | kland    | d, CA     | 94612-3550                 |              |                         |
|                     | . Bennett   |                                   |           |          |           |                            |              |                         |
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| Attorney            | Docket No.: IL-105                                | 04                                |           |          |           |                            |              |                         |
| 3. Natu             | re of conveyance:                                 |                                   |           |          |           | т                          | <del> </del> |                         |
|                     | Assignment  | •                                 | Execu     | tion I   | Date:     | 6/27/00                    |              |                         |
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| If this             | document is being filed                           | together with a                   | new       |          |           | -                          |              |                         |
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| Name concer         | and address of party to<br>ning document should b | whom correspo<br>e mailed:<br>——— | ondence   | 6. To    | otal Nun  | nber of application<br>ONE |              | ents involve            |
|                     | L.E. Carnahan                                     |                                   |           | 7. 1     | otal fe   | e                          | \$_          | 40.00                   |
| Name:               | Lawrence Livermo                                  | e Nat. Labo                       | ratory    |          | Enclo     | sed                        |              |                         |
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To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

| Kathy E. Raymond       | Kathy E. Raymend | 6/29/w |
|------------------------|------------------|--------|
| Name of Person Signing | Signature        | Date   |

Total number of pages comprising cover sheet

#### **ASSIGNMENT**

| LLN   | NL Case No.: <u>IL-10504</u>   |  |  |
|---|--|--|--|
| For   | good and valuable consideration the receipt  | of whic  | ch is hereby acknowledged ASSIGNOR(s)  |
| 1.  | Rajesh R. Patel  | _ 2.   | Steven W. Bond   |
| 3.  | Cory V. Bennett  | _ 4.   |  |
| 5.  |  | _ 6.   |  |
| 7.  |  | _ 8.   |  |
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| 946<br>inte<br>imp                              | rporation, having its statewide administration for the successors, assigns and the successors, assigns and erest for the United States and its territorial provements which are disclosed in the invention   | ve office<br>I legal<br>I posse<br>ion enti  |  |
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|   | U.S. patent application executed on6 listing the above named persons as in   | ventors  |  |
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| Pa  |  | above a<br>e, reex   | ncluding the right to claim priority and, in and to, all Letters application or any continuation, division, continuation-in-part, amination or extension of said Letters Patent and all rights of Industrial Property; |
| or  | entered into which would conflict with this as   | signme   |  |
| fact<br>and<br>the<br>inst<br>and<br>put<br>int | cts and documents relating to said invention of accessible to ASSIGNOR and will testify a sereto and will promptly execute and delive struments or affidavits required to apply for, and said Letters Patent and said equivalents reposes thereof. An attorney of record is author this assignment the filing date and serial numbers. | and sales to the result of the |  |
| the   | ND the <u>ASSIGNOR(S)</u> requests the Commise United States and any reissue or extensalifornia.   | sioner<br>ion the  | of Patents and Trademarks to issue said Letters Patent of ereof to the ASSIGNEE, the Regents of the University of  |
| ех  | ecuted this  |  | Signature of Inventor(s)   |
|   | 6/27/00<br>Date  | -  | Rajesh R. Patel  |

| executed this | Signature of Inventor(s) |
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| 6/27/00       | Stee Med                 |
| Date          | Steven W. Bond           |
| 6/21/00       | Cory Dennett             |
| Date          | Cory & Bennett           |
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| AN<br>the                                      | (D the <u>ASSIGNORIS)</u> requests the<br>United States and any reissue of<br>Lifernia.  | A  | one and Tradom   | arks to issue said Letters Pati  | ant o   |
| øx.  | ecuted this  | Signa<br><i>(</i> )  | ture of inventor(s)  | R  |   |
|  | Qáis   | Rober  | t J. Deri  |  |   |
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### **ASSIGNMENT**

| LLNL Case  | No.: <u>IL-10504</u>   |   | · '- h aby a ma'   | knowlodged   | ASSIGNO  | )R(s)  |   |
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| 1. Robert  | J. Deri  | 2   |  |  | <del> </del>   |  | _   |
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| Corporation 94607-520 interest for improvem  | ells, assigns and transfors to ASS on, having its statewide administration, and the successors, assigns a or the United States and its territor onts which are disclosed in the inverse.   | nd legal i<br>al posses<br>ntion entit  | representative ssions and in led:  | of the AS<br>all foreign   | SIGNEE a countries   | Ill of its right,<br>in and to, an   | title and   |
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| and which  | is found in  |   |  |  |  |  |   |
| ■ U.S  | i. patent application oxecuted on<br>isting the above named persons as   | 1140111010  |  |  |  |  |   |
| □ U.S  | s, patent application serial no.   |   | , filed on   |  | ····   | :  |   |
| 🔲 U. S   | S. patent no, issu   | ∌d  |  | -  |  |  | 11.1 **   |
| Patent to<br>extension<br>undor all  | ogal equivalent thereof in a foreign<br>be obtained for said invention by the<br>or substitute thereof, and any reis<br>International Conventions for the Pr   | sue, reex<br>ptection o   | amination or<br>if Industrial Pr   | extension o<br>operty;   | f said Lette   | ers Patent and   | i all rights  |
| or enterc  | OR(S) hereby covenants that no ass dinto which would conflict with this  | 1221G(11119   | 116,   |  |  |  |   |
| ASSIGNA<br>facts and<br>and acce<br>thereto a<br>instrume<br>and said<br>purposes<br>into this | OR(S) further covenants that ASSIII documents relating to said inventionsible to ASSIGNOR and will testify and will promptly execute and delints or affidavits required to apply for Letters Patent and said equivalents thereof. An attorney of record is a assignment the filing date and serial | GNEE will on and so as to the ver to All or, obtain, its there uthorized number ( | II, upon its reaid Letters Page same in any SSIGNEE or maintain, is of which may and requested said application. | y interference its legal resume or ento y be necested by the exaction when the exact | ce, litigation epresentation rce said appresentation or description of officially kn | n, or proceeding and a pplication, said a pplicatio | ng relating<br>all papers,<br>d invention<br>ry out the<br>nt to insert |
| AND the<br>the Unit<br>California  | ASSIGNOR(S) requests the Commed States and any reissue or extend.  | nissioner<br>nsion the  | of Patents a<br>ereof to the   | nd Tradema<br>ASSIGNEE   | arks to iss<br>, the Rego  | ue said Letters<br>ents of the U   | s Patent of<br>niversity of   |
| executed (   | this Date  | -   | Signature of Robert J. De  | Inventor(s)  | fu   |  |   |



#### **RECORD OF INVENTION**

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|------|------|-----|---|--|
| LLNL | File | No. |   |  |
|      |      |     |   |  |

IX. Inventor Information

| nventors Permanent Home Add | Citizenship | a separate sheet for additional inventors.)  Street Address | City, State, Zip Code  |
|-----------------------------|-------------|---|------------------------|
| Robert J. Deri              | USA         | 3769 Angus Way  | Pleasanton, CA 94588   |
| Rajesh R. Patel             | USA         | 2503 Santa Rita Road #42                                    | Pleasanton, CA 94566   |
| Steven W. Bond              | USA         | 1945 Whitecliff Court                                       | Walnut Creek, CA 94596 |
| Corey V. Bennett            | USA         | 583 Debra Street  | Livermore, CA 94550    |
| Coley V. Dollinott          |             | ,   | ·                      |
|                             |             |   |                        |
|                             |             |   |                        |
|                             | l           |   |                        |

X. Funding Source
Funding Source or Project Under Which the Invention Arose (Include subcontracts, CRADAs, International agreements, work for others, or

| Resource Manag | er             | Phone #  |  | Yes        | 140      |
|----------------|----------------|----------|--|------------|----------|
| Pam Richmon    |                | 424-4965 | S fullding precently energy  | X          | 丄        |
| LLNL Acct #    | B&R #          |          | ase state the source of funds (if same as above, please so state): |            | _        |
| 8989-60        | YN010000       | E        | ngineering ER-LDRD   | <b>L</b> . | <u> </u> |
| Subcontract.#_ | DOE Program    | Code Do  |  | Yes        | INC      |
|                |                |          |  | X          | <u> </u> |
| CRADA #        | Work for Other | s# If v  | es, what is that source?   |            |          |
|                |                | Ū        | S Government, possibly FY00 LDRD                                   |            |          |

XI. Conception of the Invention

| Conception Date                                 | Conception Place  |   | ·   |  |
|---|---|---|---|--|
| 7/21/98   | B132S, Room 1771  |   |   |  |
| Earliest documentation of document): 7/21/98 Ra | of your invention (please provide date and identify the   | First Sketch or Drawing<br>Date 7/21/98 | First Written Description<br>Date 7/21/98 |  |
| Names of Witnesses or                           | others with knowledge of facts relating to conception (pr | eferably at least 2):                   | 170.00.00                                 |  |
| Full Name                                       | Organization  |   | Telephone Number                          |  |
| Mark Lowry                                      | B-Division Photonics                                      |   | 423-2924                                  |  |
| Mike Pocha                                      | Engineering EETD  |   | 422-8664                                  |  |

XII. Reduction To Practice of the Invention

| Date first model completed                    | Date of operation and testing                        | Place of test   |
|---|--|---|
| 2/22/00                                       | 2/23/99  | B132S, Rm 1719  |
| Results of testing: demonstrat                | (II -10266) for output combining.                    | rating with channels at 820, 865, and 900 nm using single strands of multimode. Insertion loss approx. 10 dB. |
| Demonstrated a 3-wave filters. Results showed | elength, 3x3 router based<br>wavelength-conservative | on a diffraction grating in Littrow configuration and 3 porterouting. See attached Fig. 3.                    |
| Witnesses or others with direct               | ct knowledge of test (preferably a                   | at least 2):  |
| Full Name                                     | Organization   | Telephone Number  |
| Mark E. Lowry                                 | B-Division Photo                                     |   |
| Henry Garrett                                 | Engineering/EE                                       | TD 422-5639   |
|   |  |   |



# RECORD OF INVENTION

LLNL File No.

| I. Invention Use and I set the invention been put into use?  | Yes     | No             | If yes, explain:   |               |        |  |                              |
|--|---------|----------------|--|---------------|--------|--|------------------------------|
|  |         | $\overline{X}$ |  | -             |        | ·  |                              |
| as the invention been disclosed to n   | on-LLNI | L per          | sonnel?  | Yes           | No     | If yes, to whom and when? Provi  | de name(s) and date(s):      |
|  |         |                |  |               | X      |  |                              |
| yes, was the disclosure done under   | a non-d | lisclo         | sure agreement?  | Yes           | No     |  |                              |
|  |         |                |  | N             |        |  |                              |
|  |         |                |  | A             |        |  |                              |
| V. IWe believe myself/ours ventor Signature  All This Tennes All T | telves  | to b           | e the first and of Date  2   9   9   9   9   9   9   9   9   9 | origin<br>Wit | nal in | nventor(s) of the above-descriptions  Loclory Saids  Loclory Charle  Lify he fight | 3/9/99<br>3/10/99<br>3/10/99 |
| V. Classification Revie  | ew      |                |  |               |        |  |                              |
| lasis for unclassified release: Outside scope of AEA and EO  |         |                |  |               |        |  |                              |
| <u> </u>   |         |                |  |               |        |  |                              |
| CG-DAR-1, Topic(s):  |         |                |  |               |        |  |                              |
| Other Guide(s):  |         |                |  |               |        |  |                              |
| Topic(s):  |         |                |  |               |        |  |                              |
| UCNI Yes No If YES, Guide:   |         |                |  |               |        |  |                              |
|  |         |                |  |               |        | I Company  |                              |
| Authorized Derivative Classifier Na  |         |                |  |               |        | Signature  | 1 / 1                        |
| Steve Swierkowski En   | ginee   | <b>9</b> [     |  |               |        | Store Luxur  | Rowski 3/10                  |
| Confirming Reviewer Name   |         |                |  |               |        | Signature  |                              |
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|  |         |                |  |               |        | 7 3  |                              |
| (VI. For LLNL Patent G   | iroup   | o Us           | se Only  |               |        |  |                              |
| Publication  |         |                |  |               |        |  |                              |
| Public Use/Sale  |         |                |  |               |        |  |                              |
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| Recommended Filing Date Due to P   | OSSIDIE | Stati          | nory bars  |               | _      |  |                              |



# RECORD OF INVENTION

LLNL File No.

| as the invention been put into use?            | Yes No      | If yes, explain:                      |          |            |                                   |                      |
|--|-------------|---------------------------------------|----------|------------|-----------------------------------|----------------------|
| ۰  |             | • 1.                                  |          |            |                                   |                      |
| has the invention been disclosed to no         | n-LLNL p    | ersonnel?                             | Yes      | No         | If yes, to whom and when? Provide | name(s) and date(s): |
|  |             |                                       |          | X          |                                   |                      |
| yes, was the disclosure done under a           | a non-dis   | closure agreement?                    | _        | No         |                                   |                      |
|  |             |                                       | N        |            |                                   |                      |
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| IV. I/We believe myself/oursenventor Signature | eives to    | Date                                  | ongii    | noce       | Signature                         | Date                 |
| A A D A  |             | Date                                  | +***     |            |                                   | 2/-/-                |
| The John                                       |             | 2/9/97                                | <u> </u> | <u> </u>   | ene Underson                      | 3/9/99               |
| <u> </u>                                       | 4-1         | 2/10/199                              | 1.5      | 17         | see of lail.                      | 31.100               |
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|  |             | 2/1/20                                | 12       | 1          | 11. 4 11.                         | 3/100                |
| ores Dennett                                   |             | 7/10/49                               |          | Mi         | My her fton                       | 1/10/77              |
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|  |             |                                       |          |            |                                   |                      |
| V. Classification Review                       | W           |                                       |          |            |                                   |                      |
| Basis for unclassified release:                |             |                                       |          |            |                                   |                      |
| Outside scope of AEA and EO                    |             |                                       |          |            |                                   |                      |
| CG-DAR-1, Topic(s):                            |             |                                       |          |            |                                   |                      |
| Other Guide(s):                                |             |                                       |          |            |                                   |                      |
| Topic(s):                                      |             |                                       |          |            |                                   |                      |
| UCNI Yes No If YES, Guide:                     |             |                                       |          |            | <del></del>                       |                      |
|  | <del></del> |                                       |          |            |                                   |                      |
| Authorized Derivative Classifier Nam           | e and Tit   | le                                    |          |            | Signature /                       |                      |
| Steve Swierkowski Engi                         |             |                                       |          |            |                                   | 1. 2/1n              |
| <del>_</del>                                   |             |                                       |          |            | Signature Swarks                  | WOIL 5/19            |
| Confirming Reviewer Name                       |             |                                       |          |            | Signature                         | <u> </u>             |
| Wm. A. Bourner (                               | LARS        | IFICATION AD                          | V180     | <b>1</b> _ | Wh. H. Keli                       |                      |
|  |             | · · · · · · · · · · · · · · · · · · · |          |            |                                   | <del></del>          |
| VI. For LLNL Patent Gre                        | oun II      | se Only                               |          |            |                                   |                      |
| ossible Statutory Bars                         | -ap o       |                                       |          |            |                                   | ·                    |
| Publication                                    |             | •                                     |          |            |                                   |                      |
| Public Use/Sale                                |             |                                       |          |            |                                   |                      |
| Recommended Filing Date Due to Poss            | sible Stat  | utory Bars I                          | - : -    |            |                                   |                      |
| rewrittended I ming bate bue to I ost          | CWI         |                                       |          |            |                                   |                      |
| Preliminary Review By:                         |             | Date                                  |          |            |                                   |                      |